Quick Tips for Heart Device Patients

Heart Rhythm Society℠

(Implanted pacemakers, defibrillators, or CRT devices)

Your heart device is intended to provide peace of mind and a better quality of life. Have you taken a moment to consider its on-going management?

The battery will typically require replacement every **6-12 years,** and the leads, or wires that connect the battery to your heart, may also require replacement.

What to look out for

Some of the signs and symptoms that you should bring up with your doctor include:

- Signs of infection (see list to the right)
- Feeling dizzy, faint, lightheaded, a loss of consciousness, experiencing new or worsening shortness of breath, irregular heartbeat, palpitations and/or frequent hiccups
- Audible sound and/or vibration from the device
- Constant muscle twitching and/or inappropriate shocks
- Change in clinical needs (adding/modifying pacing or defibrillation)



You may feel...
Fever
Sweating
Chills
Fatigue
Nausea

You may see...
Redness of the skin
Pain or tenderness
Swelling
Warmth or “hot” feeling
Blood, pus, or other drainage
Skin ulcers
Erosion of the device though the skin

If new leads are needed, what happens to the old ones?

Unless an infection is present, you and your physician may discuss the option of leaving an old lead in your body (called lead abandonment) or the option of removing the lead (called lead extraction). In the event of an infection, complete system removal is recommended (including the leads), as the benefits strongly outweigh the risks.[1]

You have options!

It is important to know your alternatives. If additional leads are added without removing the old ones, the procedural risks of a lead extraction are avoided, but the old leads can increase the risk of potential future complications:

+ Higher risk of future device infection[2]
+ More complex future lead extraction (removal)[3]
+ Higher risk of occlusion (clotting or narrowing of the vein) or potential damage to heart structures[4]
+ May complicate or prevent you from getting an MRI[5]

Alternatively, lead extraction is generally a very safe procedure. However, as with any invasive procedure, there are risks. Several large studies show clinical success rates around 98%.[7-9] The risk of internal bleeding, a tear in a vein or heart, or death is less than 0.5%. Treatment decisions should be based on consultation with your physician.

Q. Can my doctor perform a lead extraction?

A. Possibly.

To find a physician that specializes in lead extraction, go to **UpBeat.org/Find-a-Specialist** and select **“lead extraction”** as a specialty in the search criteria.

Learn more today

Empower yourself when it comes to living with a heart device. Learn more about how to make smart decisions about your device and lead care at **UpBeat.org/CIED-Management**

Tip

When your physician discusses a change to the battery of your heart device, ask about the status of your leads.

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By Heart Rhythm Society

From the bottom of our hearts to yours

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1. Kusumoto, FM, et al. 2017 HRS Expert Consensus Statement on Cardiovascular Implantable Electronic Device Lead Management and Extraction. Heart Rhythm, 2017
2. Pokorney et al. Outcomes Associated with Extraction versus Capping and Abandoning Pacing and Defibrillator Leads Circulation 2017 Oct 10;136(15):1387-1395. doi: 10.1161/CIRCULATIONAHA.117.027636. Epub 2017 Aug 22.
3. Hussein, Ayman A., et al. “Cardiac Implantable Electronic Device Infections: Added Complexity and Suboptimal Outcomes With Previously Abandoned Leads.” JACC: Clinical Electrophysiology (2016).
4. de Cock CC, et al. Long-term outcome of patients with multiple (>or = 3) noninfected leads: a clinical and echocardiographic study. PACE, Vol 23, No 4, 2000, 423-6.
5. Mattei, E., Gentili, G., Censi, F., Triventi, M. and Calcagnini, G. (2015), Impact of capped and uncapped abandoned leads on the heating of an MR-conditional pacemaker implant. Magn Reson Med, 73: 390–400. doi: 10.1002/mrm.25106
6. Kalin R, Stanton MS. Current clinical issues for MRI scanning of pacemaker and defibrillator patients. PACE. April 2005;28(4):326-328.
7. Wazni, O et. al. Lead Extraction in the Contemporary Setting: The LExICon Study: A Multicenter Observational Retrospective Study of Consecutive Laser Lead Extractions, J Am Coll Cardiol, 55:579-586.
8. Bongiorni, Maria Grazia, et al. “The European lead extraction ConTRolled (ELECTRa) study: a European heart rhythm association (EHRA) registry of transvenous lead extraction outcomes.” European heart journal 38.40 (2017): 2995-3005.
9. Pecha, S., Burger, H., Möller, V., Madej, T., Osswald, B., Maali, A., ... & Elfarra, H. (2019). The German Laser Lead Extraction Registry: GALLERY. The Thoracic and Cardiovascular Surgeon, 67(S 01), DGTHG-V49.